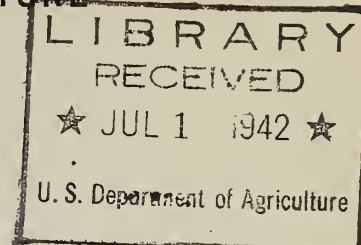


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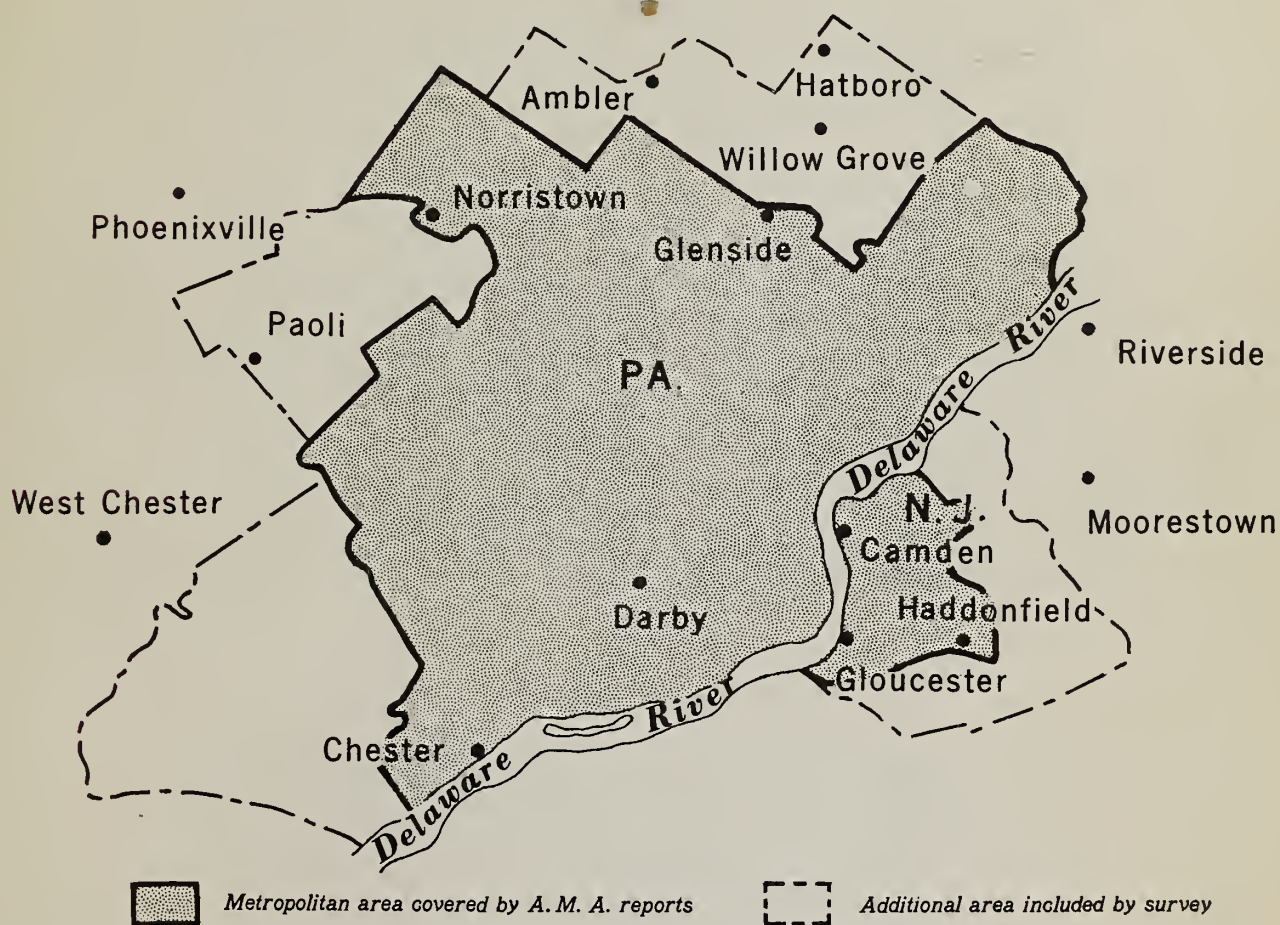
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UNITED STATES DEPARTMENT OF AGRICULTURE
U.S. AGRICULTURAL MARKETING ADMINISTRATION
AND
THE PENNSYLVANIA STATE COLLEGE



RECEIPTS OF MILK AND CREAM AT THE PHILADELPHIA MARKET, 1939-40



by
H. A. Rust, Marketing Specialist

AGRICULTURAL MARKETING ADMINISTRATION

and

C. W. Pierce, Associate Professor of Agricultural Economics

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Since 1929, the Philadelphia dairy and poultry office of the Agricultural Marketing Administration^{2/} has been gathering data on receipts of milk, cream, and condensed milk at Philadelphia. This information formed the basis of a weekly mimeographed report available for free distribution to any interested person.

When these weekly reports were first issued receipts of these commodities were largely by rail, receivers relatively few in number, and the distributing area compact and fairly well defined. During the period in which these reports have been issued truck transportation has become an increasingly important factor, receivers more numerous, and the metropolitan area has been much expanded. The Agricultural Marketing Administration has had to make repeated adjustments in procedure to meet the changing conditions. To check the adequacy of these changes and explore the possibility of further adjustments a survey was made covering the years 1939 and 1940. Receipts data carried in the reports were checked for accuracy and completeness. A survey of a larger area than the reports have covered was made to ascertain if milk and cream received in that additional area should be included in the reports.

1/ This report is based on a joint survey conducted by the Agricultural Marketing Administration and the Bureau of Agricultural Economics of the United States Department of Agriculture, and the Pennsylvania State College. Grateful acknowledgment is made of assistance rendered by the Pennsylvania and New Jersey Milk Control Boards in making available their records.

2/ In 1929 the dairy and poultry work, to which this report relates, was a part of the Bureau of Agricultural Economics. In July 1939 the work was transferred to the Agricultural Marketing Service, and this, by Executive Order of February 23, 1942, was, in turn, merged with other Department agencies to form the Agricultural Marketing Administration.

Philadelphia Milk, Cream, and Condensed Milk Reports

The Philadelphia dairy and poultry office prepares and distributes a weekly and a monthly milk, cream, and condensed milk market report. Receipts data are tabulated according to States of origin and mode of transportation. They not only show current volume and trends, but make possible the compilation of valuable weekly, monthly, and yearly series for comparative purposes.

The Government report superseded a private report which was issued monthly from 1887 to 1931 by the Philadelphia Milk Exchange. The Milk Exchange compiled milk and cream receipts on a monthly basis from information contributed largely by its members, and the tabulation was chiefly for the members' benefit. The Government report, however, has provided broader coverage, more timely release of data, and free and wide distribution.

Data Obtained on Voluntary Basis

All information contained in the weekly and monthly reports is obtained on a cooperative and voluntary basis. From receiving points, railways report daily arrivals to the Philadelphia dairy and poultry office of the Agricultural Marketing Administration on mailing forms furnished by that Administration. The volumes are listed in quarts or pounds according to States of origin. Dealers are supplied with similar forms for reporting truck receipts. The larger dealers report on a daily basis; other dealers report only weekly totals. There are, however, a number of firms that prefer to report receipts by telephone. In 1939 and 1940, the years used as the basic period for this study, 8 railway stations and 13 large dealers reported receipts on a daily basis, and 44 dealers reported on a weekly basis.

Area Covered by the AMA Reports

Receipt figures compiled by the AMA are of milk, cream, and fresh condensed milk arriving in Philadelphia, Camden, and adjacent suburbs served by distributors operating within this area. Most large firms are located within the city limits, but some are in nearby suburbs and a few are some distance from the market. For general purposes the territory included in the metropolitan area has been assumed to extend approximately 20 miles out from Philadelphia city hall in Pennsylvania, and 5 miles from Camden city hall in New Jersey (see front cover).

The boundaries of the area covered are difficult to define because retail delivery routes of milk disregard civil boundaries and tend to follow population movement into suburban areas. As the metropolitan area expands, large dairies in the city merely extend their routes into new developments. Small dairies located in the suburban area experience stimulated growth and dairies some distance from the market find it

increasingly profitable to process milk for distribution in the metropolitan market.

Population of the Metropolitan Milk Marketing Area

The population of the above described area totals approximately $2\frac{1}{2}$ millions. The increases during the decade ending in 1940 were relatively small, being less than 1 percent (table 1). There was, however, a definite trend from the cities proper to the less densely populated suburban areas.

Increases in Truck Transportation

The receipts of milk and cream on the Philadelphia market from year to year show a transition from rail to truck transportation, a decline in cream receipts, a marked increase in milk receipts, and the effect on total volume of these commodities of adverse economic conditions during depression years (table 2).

The proportion of milk received on the Philadelphia market by truck increased from approximately 55 percent of the total in 1929 to 84 percent in 1940. Truck arrivals of cream increased from about 5 percent in 1929 to 53.5 percent in 1940. The present rubber emergency situation may retard or even reverse this trend in transportation.

Total Receipts of Cream Decline

The decline in total receipts of cream may be attributed to several causes including policies governing the licensing of producers and distributors and changes in transportation. Cream from a number of States that supplied the Philadelphia market prior to 1937 was no longer received. For the most part these States were those farthest from the market. In 1929 and 1930 Philadelphia cream supplies were coming from 23 States (table 2). Some decrease in the number of States supplying cream occurred in 1931 and in 1936 there was a sharp decline. By 1938 there were only 8 States supplying the entire market (table 3).

Dealers adjusted their organizations to conform to legislative restrictions. So-called western cream was largely replaced by cream from the nearby States that were a part of the Philadelphia fluid milk shed. Dealers found it expedient to truck larger volumes than formerly of nearby fluid milk into the Philadelphia metropolitan areas for processing, and to close a number of their outlying processing plants. Receipts figures of milk and cream reflect the change by increases in receipts of milk and corresponding declines in receipts of cream. The increase in milk receipts compensated for the decrease in cream receipts. The whole milk equivalent of milk and cream receipts

declined from 1929 to 1936 and increased from 1936 through 1940 (table 2). Despite the increase of 1 million 40-quart cans of milk in 1940 over that of 1929, the whole milk equivalent of receipts of milk and cream in 1940 was slightly less than in 1929.

Problems Involved in Obtaining Information

This work of compiling data and issuing reports of receipts of milk and cream was undertaken as an additional service to the dairy industry by the Philadelphia dairy and poultry office of the Agricultural Marketing Administration. This office was primarily engaged in supplying a grading, inspection, and market news service on butter, cheese, eggs, and dressed poultry. Since no additional employees were available to handle the new activity, it became necessary for the regular force to do what they could during the time that could be spared from other duties.

Dealer cooperation, for the most part, has been fairly satisfactory. A certain number of delinquent reports each day necessitates numerous telephone calls. These are supplemented with letters asking for fuller cooperation. It was not possible, except rarely, for representatives of the Agricultural Marketing Administration to make personal visits, since their time was fully occupied with other duties. When letter or telephone requests failed to get proper response from individual firms, it was found expedient to use the last reported figures. In a few instances, where failure to report continued over a period of time, it was necessary to drop such firms from the list.

The proper area to include in the report on receipts presented a major problem because the number of dealers increased and the metropolitan area gradually expanded. In 1929 receipts were largely by rail and a large part of the milk business was in the hands of a relatively few dealers. These conditions changed year by year. The suburban area developed. Small dairies grew and new ones came into being. Quite frequently these were outside the city limits, and occasionally a considerable distance away, yet they distributed largely within the city proper.

The volume of receipts handled by a dealer was a factor in deciding whether it was practical to include a dairy plant on the list of those reporting receipts. There was no established rule with regard to the minimum volume which should be included, and no effort was made to include all dairies that handled comparatively small quantities.

Procedure Followed in the Survey

A survey was first made of the area which the Agricultural Marketing Administration has attempted to cover (see front cover).

Records of the Pennsylvania and New Jersey Milk Control Commissions furnished a complete list of licensed dealers and statistics of volume for comparison with those reported to the AMA. A further check was made with certain individual firms to establish definitely the area to which their reported receipts applied. Information was obtained from the records of the Milk Control Commissions for a still wider area surrounding Philadelphia (see front cover) to ascertain more accurately where the boundaries of the metropolitan area might be most logically located.

AMA and Survey Figures Check Closely

Checking daily and weekly reports of individual firms revealed minor errors by those supplying the data and also by those interpreting and compiling the figures submitted. In most instances, however, there was satisfactory agreement between data furnished the AMA and the Milk Control Commissions. Variances occurring were both above and below the figures reported to the AMA. There were instances where the records of the Milk Control Commissions were not satisfactory as a check owing to incompleteness, location and distribution of individual firms, and other factors. The significant point is that annual totals for all firms checked closely. In 1939 the AMA report for 58 firms showed a total of 321,971,160 quarts of milk, as compared with a survey total for these same firms of 322,442,490 quarts (table 4). In 1940, AMA reported a total of 338,328,200 quarts for 56 firms; the survey showed a total for these same firms of 340,083,509 quarts.

Survey Includes All Licensed Dealers

The survey included all licensed milk handlers located within the area covered by the AMA and also the larger firms outside this area whose receipts were included in the AMA figures. The survey included 121 firms in both 1939 and 1940, whereas the AMA report included 58 firms in 1939 and 56 in 1940 (table 4). The volume handled annually by firms included in the survey ranged from 5,000 quarts upward. Receipts reported by AMA, for 58 firms, totaled 321,971,160 quarts, which was 95.85 percent of the survey total of 335,912,769 quarts handled by 121 firms. In 1940, 56 firms reported to AMA 338,328,200 quarts, which was 95.24 percent of the survey total of 355,223,603 quarts for 121 firms (table 4). Thus, the survey shows that firms not reporting, although comparatively numerous, handled only a small portion of the total volume. In 1939, as shown by the survey, the 61 firms that did not report handled only 4.15 percent of the survey total, and in 1940 the 63 firms that did not report handled 4.76 percent of that total.

Additional Receipts Areas Surveyed

It was known that certain more or less densely populated sections existed outside the area covered by the AMA in the receipts reports.

Milk firms in Philadelphia deliver into these sections. Similarly, milk firms located in these adjacent sections deliver milk not only locally but also into Philadelphia proper. The survey included adjoining townships and boroughs on the basis of population and sources of milk supply. The following civil areas were considered as possible additions to the present area. (These additions are shown on the cover page.)

In Pennsylvania:

Philadelphia County.

Eight remaining townships in Delaware County.

Two townships, East Town and Tredyffrin, in Chester County adjacent to Delaware and Montgomery Counties.

The additional townships in Montgomery County of Abington, Upper Dublin, Upper Moreland, Lower Moreland, Upper Merion and Whitpain; Boroughs of Ambler, Bryn Athyn, and Hatboro.

In New Jersey:

Gloucester, Delaware and Pennsauken townships and Bell Mawr, Barrington, Lawnside, Magnolia, Haddon Heights, Tavistock, and Runnemede Boroughs.

The population in these additional areas totals approximately 100,000 according to the 1940 United States Census figures. The inclusion of these sections would increase by about 4 percent the population of the area covered.

Included in these additional areas would be nine firms receiving milk (table 5). Their volume in 1939 totaled 3,242,295 quarts; in 1940, 3,486,976 quarts. This volume is less than 1 percent of the volume handled by 121 firms in the present area covered by AMA. The volume change is small because some of the larger dealers in these surveyed sections were already reporting to the AMA.

Summary and Conclusions

1. Statistics of receipts of milk and cream at Philadelphia, issued by the Agricultural Marketing Administration, included the volume handled by 58 dealers in 1939 and 56 dealers in 1940.
2. The reported figures were 95.85 percent and 95.24 percent complete for the years 1939 and 1940, respectively, as ascertained by a survey of all 121 licensed dealers in the metropolitan area.
3. Population changes in the metropolitan area for the 10-year period ending January 1, 1940, amounted to an increase of approximately 20,000 persons, or eight-tenths of 1 percent.

4. State regulations were influential in reducing the area which formerly supplied the Philadelphia market and resulted in the following adjustments:
 - (a) The number of States supplying cream was reduced from 23 in 1929 to 8 in 1940.
 - (b) A steady increase in truck transportation of milk and cream, with corresponding decline in rail transportation, was stimulated by the more restricted area.
 - (c) A number of country processing plants were closed as truck hauling increased, resulting in an increase in the volume of fluid milk received and processed in the Philadelphia metropolitan area.
5. For complete coverage regular reports are needed from the many small handlers. To obtain them, however, is not possible with the present personnel.
6. A certain portion of Philadelphia milk and cream receipts is processed and reshipped for consumption outside the market. There is some conversion of these receipts to butter, cream cheese, and other products. The volume in comparison with the total, however, is quite small and is at least partially offset by importations from dealers outside the market who do not report.
7. The receipts of milk and cream probably do not form a suitable basis for calculating per capita consumption accurately. A more suitable basis would be the whole milk equivalent of milk and cream receipts, although this would not be entirely accurate because of the variable amount of processing which takes place within the metropolitan area and variations in the proportion of the total receipts which is included in the reported data.

Recommendations and Suggestions

The authors of this report recommend that a representative of the Agricultural Marketing Administration make a study once each year of the dealers' applications for licenses on which are shown volume handled. These licenses are on file with the State Milk Control Commissions. Such a study would provide an inexpensive check as to the number of firms and volume of operations of those dealers who are not already reporting receipts. Furthermore, it would be possible to ascertain approximately what portion of the total receipts were included in the Agricultural Marketing Administration's reports.

It is recommended that the State Milk Control Commissions in Pennsylvania and New Jersey prepare each month a record of the Class I and Class II sales for as many distributors in the Philadelphia metropolitan area as report such data promptly, and that these data be submitted to the Agricultural Marketing Administration at Philadelphia for publication in the regular milk and cream reports.

It is further recommended that the Agricultural Marketing Administration continue to request regular reports from all dealers located within the area now covered who handle more than 250,000 quarts annually. Those dealers outside the prescribed area who handle in excess of 500,000 quarts annually, the majority of which is distributed within this area, should also be urged to report on a regular basis.

The additional area surveyed does not reveal a significant volume of receipts of milk and cream, and under present conditions it would not appear essential to include reports of dealers outside the original reporting area. Emphasis should preferably be placed on obtaining complete reports from all of the larger firms within the present area.

Table 1. - Population of the Philadelphia metropolitan
milk marketing area

State	County	1930 ^{1/}	1940 ^{1/}
Pennsylvania	Philadelphia	1,950,961	1,931,334
	Delaware ^{2/} Excepting 8 outlying townships	267,371	296,169
	Montgomery ^{3/} 5 townships 7 boroughs	131,321	142,825
New Jersey	Camden ^{4/} 1 township 7 boroughs 2 cities	166,982	166,359
Total		2,516,635	2,536,687

^{1/} U. S. Census figures.

^{2/} Excepting Ashton, Bethel, Birmingham, Concord, Edgemont, Middletown, Thornburg, and Upper Chichester townships.

^{3/} Including only Cheltenham, Lower Merion, Plymouth, Springfield and Whitmarsh townships and Bridgeport, Conshohocken, Narbeth, Norristown, Rockledge, and West Conshohocken boroughs.

^{4/} Including Haddon township; Audubon, Collingswood, Haddonfield, Brooklawn, Oaklyn, Merchantville, and Mt. Ephraim boroughs; Camden and Gloucester cities.

Table 2. - Annual receipts of milk and cream at Philadelphia, by years, 1929-40
(40 quart containers)

Year	Milk		Cream		Total		Whole milk equivalent ¹ / ₂	Percent cream by truck	Percent milk by truck
	Rail	Truck	Rail	Truck	Milk	Cream			
1929	3,357,097	4,076,037	375,278	19,578	7,433,134	394,856	11,381,694	4.96	54.84
1930	3,274,572	4,120,745	384,406	8,623	7,395,317	393,029	11,325,607	2.19	55.72
1931	3,047,111	4,196,567	321,254	12,621	7,243,678	333,875	10,582,428	3.78	57.93
1932	2,620,955	4,217,137	256,117	17,163	6,838,092	273,280	9,570,892	6.28	61.67
1933	2,433,466	4,354,165	217,612	50,965	6,787,631	268,577	9,473,401	18.98	64.15
1934	2,336,985	4,661,783	164,875	97,737	6,998,768	262,612	9,624,888	37.22	66.61
1935	2,066,710	4,999,288	204,099	26,607	7,065,998	230,706	9,373,058	11.53	70.75
1936	1,981,658	5,183,499	148,016	56,946	7,165,157	204,962	9,214,777	27.78	72.34
1937	2,009,424	5,321,628	148,370	84,450	7,331,052	232,820	9,659,252	36.27	72.59
1938	1,709,167	5,716,168	130,357	100,837	7,425,335	231,194	9,737,275	43.62	76.98
1939	1,422,679	6,626,600	115,348	137,068	8,049,279	252,416	10,573,439	54.30	82.33
1940	1,374,432	7,083,773	128,918	148,374	8,458,205	277,292	11,231,125	53.51	83.75

¹/₂ Cream converted to milk at rate of 1 to 10.

Table 3. - Receipts of cream at Philadelphia by States of origin, 1929-40
(40 quart units)

State	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
Dela.	2,777	4,371	6,035	6,324	3,178	2,556	902	43	-	939	152	-
Md.	38,947	39,214	25,403	39,701	34,202	20,634	28,163	32,989	34,343	46,367	33,293	39,425
N.J.	2,090	589	1,991	620	2,032	260	-	-	-	2,037	933	73
N.Y.	50	3,083	21,004	5,265	2,121	17,902	3,502	3,212	12,292	17,704	20,339	25,054
Ind.	59,026	73,237	97,298	70,147	44,434	20,538	40,606	22,395	31,707	21,442	13,945	38,890
Ohio	33,047	29,260	23,894	12,288	8,940	9,257	10,999	17,583	-	-	1,621	500
Wis.	86,589	92,010	75,687	73,792	83,172	76,470	65,056	43,661	50,930	45,655	56,106	64,519
Pa.	48,167	46,292	41,719	37,206	69,497	104,757	55,540	76,685	103,448	97,050	126,028	108,831
Mich.	2,406	17,292	6,500	2,050	1,400	600	12,125	4,919	100	-	-	-
D.C.	200	-	-	-	150	690	75	200	-	-	-	-
Ill.	4,341	2,754	2,000	8,985	2,263	1,821	2,210	3,075	-	-	-	-
Mo.	27,041	15,367	7,888	2,618	4,009	4,350	3,506	200	-	-	-	-
Ky.	4,220	4,822	1,200	-	-	-	200	-	-	-	-	-
Minn.	53,800	19,334	3,018	1,071	5,925	1,990	5,856	-	-	-	-	-
Tenn.	3,221	4,756	2,155	1,800	-	-	200	-	-	-	-	-
W.Va.	640	1,989	6,695	4,031	2,620	1,385	920	-	-	-	-	-
Va.	16,691	31,172	9,837	6,982	4,434	246	-	-	-	-	-	-
Texas	1,318	1,748	1,145	400	200	-	-	-	-	-	-	-
Ark.	1,813	-	406	-	-	-	-	-	-	-	-	-
Kans.	2,000	1,268	-	-	-	-	-	-	-	-	-	-
Okla.	1,673	1,450	-	-	-	-	-	-	-	-	-	-
Iowa	3,753	400	-	-	-	-	-	-	-	-	-	-
Miss.	400	200	-	-	-	-	-	-	-	-	-	-
Total	394,856	393,029	333,875	273,280	268,577	262,612	230,706	204,962	232,820	231,194	252,416	277,292
Receipts	394,856	393,029	333,875	273,280	268,577	262,612	230,706	204,962	232,820	231,194	252,416	277,292
Truck	-	-	-	-	-	-	-	-	-	-	-	-
Receipts	-	-	-	17,163	50,965	17,839	26,607	56,946	84,450	100,837	137,068	148,374

Table 4. - Receipts of milk and cream at Philadelphia market as reported by AMA,
compared with data obtained in survey 1939-40
Firms classified according to volume handled

Reported by firms located within prescribed area	1 9 3 9				1 9 4 0			
	AMA		Survey		AMA		Survey	
	No. firms	Volume	No. firms	Volume	No. firms	Volume	No. firms	Volume
Receiving annually								
1,000,000 quarts or more	36	288,085,933	36	287,884,699	36	301,765,027	36	302,857,459
Additional firms included in survey	-	-	1	1,047,406	-	-	1	1,182,600
500,000 to 999,999 quarts	5	3,711,534	5	3,561,629	6	4,425,249	6	4,317,112
Additional firms included in survey	-	-	9	6,101,682	-	-	8	5,805,905
250,000 to 499,999 quarts	3	1,037,867	3	1,218,125	2	554,627	2	618,103
Additional firms included in survey	-	-	7	2,550,884	-	-	8	3,532,656
100,000 to 249,999 quarts	2	277,266	2	327,321	1	209,000	1	209,000
Additional firms included in survey	-	-	14	2,116,149	-	-	15	2,690,084
Under 100,000 quarts	2	135,475	2	186,772	1	90,402	1	192,233
Additional firms included in survey	-	-	32	1,654,158	-	-	33	1,928,849
Reported by firms located outside prescribed area								
Receiving more than 500,000 annually	10	28,723,085	10	29,263,944	10	31,283,895	10	31,889,602
Comparison with same firms	58	321,971,160	58	322,442,490	56	338,328,200	56	340,083,509
Additional firms not reporting	-	-	63	13,470,279	-	-	65	15,140,094
TOTAL	58	321,971,160	121	335,912,769	56	338,328,200	121	355,223,603
Percent total		95.85		100.00		95.24		100.00

Table 5. - Receipts of milk and cream at Philadelphia, as ascertained by survey, for present area compared with suggested larger area, 1939-40

Dealers receiving annually	1939						1940					
	Present area			Suggested additional area			Present area			Suggested additional area		
	No. firms	Survey total volume	No. firms	No. firms	Volume		No. firms	Survey total volume	No. firms	Volume		
1,000,000 quarts or more	37	288,932,105	1	1	2,501,877		37	304,040,059	1	2,718,756		
500,000 to 999,999 quarts	14	9,663,311	-	-	-		14	10,123,017	-	-		
250,000 to 499,999 quarts	10	3,769,009	-	-	-		10	4,150,759	-	-		
100,000 to 249,999 quarts	16	2,443,470	3	3	451,338		16	2,899,084	3	451,488		
Under 100,000 quarts	34	1,840,930	5	5	289,080		34	2,121,082	5	316,732		
Dealers located outside but distributing in AMA area												
Receiving more than 500,000 annually	10	29,263,944	-	-	-		10	31,889,602	-	-		
TOTAL	121	335,912,769	9	9	3,242,295		121	355,223,603	9	3,486,976		
Percent increase of suggested over present area			7.44	7.44	0.97				7.44	0.98		

